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Progress of beam diagnosis system for EAST neutral beam injector

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As the first full superconducting non-circular cross section Tokomak in the world, Experimental Advanced Superconducting Tokamak (EAST) is used to explore the forefront physics and engineering issues on the construction of Tokomak fusion reactor. Neutral beam injection has been recognized as one of the most effective means for plasma heating. According to the research plan of the EAST physics experiment, two sets of neutral beam injector (4～8MW，10～100s) were built and operational in 2014.

The paper presents the development of beam diagnosis system for EAST neutral beam injector (NBI) and the latest experiment results obtained on the test-stand and EAST-NBI-1 (the first heating neutral beam of EAST). Those results show that EAST NBI operates properly and all targets reach or almost reach the design targets. All these lay a solid foundation for the achievement of high quality plasma heating and current driving for EAST.